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121

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/615,373 | 07/09/2003 | Michel Arseneau | A-8632 | 1385 |
| 7590 03/12/2004 Hoffman, Wasson & Gitler, P.C. Suite 522 2361 Jefferson Davis Highway Arlington, VA 22202 | | | EXAMINER TRIEU, THAI BA | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3748 | |

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/615,373

Applicant(s)

ARSENEAU, MICHEL

Examiner

Thai-Ba Trieu

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-12 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07/09/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

- Applicant should elect either **"sleeve"** or **"insert"** to disclose the element **"166"**, in order to make the specification to be consistent (See Paragraph [0087], lines 3-4, 9, and 17; and Paragraph [0089], line 7).

- In Paragraph [0087], line 5, **"162"** after **"bridge "** should be replaced by **- 165 -** (for correcting typo error).

Appropriate correction is required.

Claim Objections

Claims 1-5 and 9-12 are objected to because of the following informalities:

- In claim 1, line 5, after **"shaft;"**; Claim 2, line 2, after **"centerline;"**; Claim 3, line 5, after **"cylinders;"**; Claim 4, line 3, after **"body;"**; Claim 5, line 6, after **"body;"**; Claim 9, line 5, after **"shaft;"**; Claim 10, line 2, after **"centerline;"**; Claim 11, line 5, after **"cylinders;"**; and Claim 12, line 3, after **"body;"**; -- and -- should be inserted

- In claim 5, lines 8-9, **"wall"** should be replaced by **-- edge--**, for consistency of the whole specification and claim).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, and 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Salvatore et al. (Patent Number GB 2 020 739 A).

Salvatore discloses an internal combustion engine comprising:

a body (1), said body having an inner surface, an outer surface, and an axis (See Figure 2);

a shaft (9) rotatably mounted within said body (1) (See Figure 2);

a pair of pistons (4) within said body, said pair of pistons (4) attached to and extending from the shaft (9) (See Figure 2);

an intake port (12) and an exhaust port (13) form in said body (1) (See Figure 1);

a combustion chamber (10) formed in said shaft (9), said combustion chamber (10) having an axis collinear with said body axis (See Figures 1-2);

wherein said body (1) has a centerline (Not Numbered) ; and said shaft (9) extending along said body centerline (Not Numbered) (See Figure 2);

a pair of cylinders (5);

said pair of pistons (4) reciprocating within said pair of cylinders (5) (See Figure 2);

a second combustion chamber (Not Numbered) formed between said pair of cylinder (5) (See Figure 2);

an ellipsoid guide (25) in said body (1) (See Figure 2);

said pair of pistons (4) retained in said ellipsoid guide (25) (See Figure 2);

and

a sleeve portion (11) between said shaft and said body (See Figure 1;

Page 1, lines 102-130, and Page 2, lines 1-81).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salvatore (Patent Number GB 2 020 739 A), in view Carmody et al. (Patent Number 5,344,164).

Salvatore discloses the invention as recited above; and further discloses bearings (3) located between the sleeve (11) and the shaft (9); however, Salvatore fails to disclose an O-ring.

Carmody teaches that it is conventional in the mechanical seal art, to utilize O-ring (30) located between said sleeve (23) and said shaft (3) (See Figures 1-4, Column 1, lines 32-34, Column 6, lines 45-47).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized O-ring being between the sleeve and the shaft, as taught by Carmody, since the use thereof would have aligned the relative positions of rotating and stationary parts of the device.

Allowable Subject Matter

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The IDS (PTO-1449) filed on July 09, 2003 has been considered. An initialized copy is attached hereto.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Townsend (US Patent Number 2,894,496) discloses an internal combustion engine.
- Hottelet (US Patent Number 3,604,406) discloses a rotary cylinder.

- Mercer, Jr. (US Patent Number 3,522,796) discloses internal combustion engines.
- Auriol (US Patent Number 592,073) discloses a gas engine.
- Sahagian (US Patent Number 3,688,751) discloses a rotary engine construction.
- Gardiner (US Patent Number 2,989,005) discloses a fluid apparatus having a longitudinal barrier, which isolates the two chambers from one another.
- Hilton (Pub. Number WO 91/06752) discloses an internal combustion engine.
- Nilsson (Patent Number FR 798,881) discloses a rotary internal combustion engine having a barrier/partition (6), which divides two combustion chambers (2b and 3b).
- Yamashita et al. (Patent Number JP 07224836 A) disclose a bearing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (703) 308-6450. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3748

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
March 11, 2004



Thai-Ba Trieu
Patent Examiner
Art Unit 3748